Operation User Manual

Oko 2000 μP

Ver 2.3

Si-nAn B/D 1F,SungSan-dong,Mapo-gu,Seoul,Korea. Tel (02) 3141-0889, Fax (02) 3141-8890 E-mail : jcpark@namasmt.com

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1. Safety Notes

These Operating Instructions should be read carefully before starting up the machine.

NOTE:

The washing machine OKO 2000µP must only be connected to a supply protected by a fuss rated at not more than 16 A !

The machine must only be installed by suitably qualified personnel !

Use of other cleaning agents without prior agreement by NE GmbH leads to loss of warranty for the machine and may cause severe damage to it !

The manufacturer of the circuit board washing machine OKO2000µP does not accept any liability for damage relating to process, material and temperature compatibility of the washed circuit boards and components!

Regularly check the bottom metal sieve for traces of rust.
These may be caused by pieces of iron from the washed load.
These iron pieces have to be removed as they may lead to contact corrosion on the stainless steel.

1. 취급 주의 사항

사용 전 운영 매뉴얼을 반드시 숙지 한 후 장비를 운영하시기 바랍니다.

[요 약]

- Washing machine OKO-2000uP PCB 세척기는 16A의 퓨즈를 사용하여 과-전압으로부터 보호하는 기능을 같고 있습니다.
- 세척기는 적합한 설치자에 의해 설치 되어야 하며 관리 되어야 합니다.
- 반드시 세척장비 전원부분에 전자식 누전차단기 및 접지를 하여야 하며 통풍이 되어야 합니다.
- 설치 社 동의 없이 다른 세척용도로 使用 시 기계의 보증 과 기계의 손상에 대한 책임을 지지 않습니다.
- 세척기의 공급자는 PCB의 종류에 따른 온도 와 세척제의 적합성에 대한 세척과정에서 손상에 대한 책임을 지지않는다.
- 정기적으로 세척기 하단의 잔류(납등)을 걸러내는 깔대기를 점검하고 제거하여야 한다.
- 기타 내용에 대하여 인터넷을 참고 하십시오 그 외 내용은 문의 바랍니다

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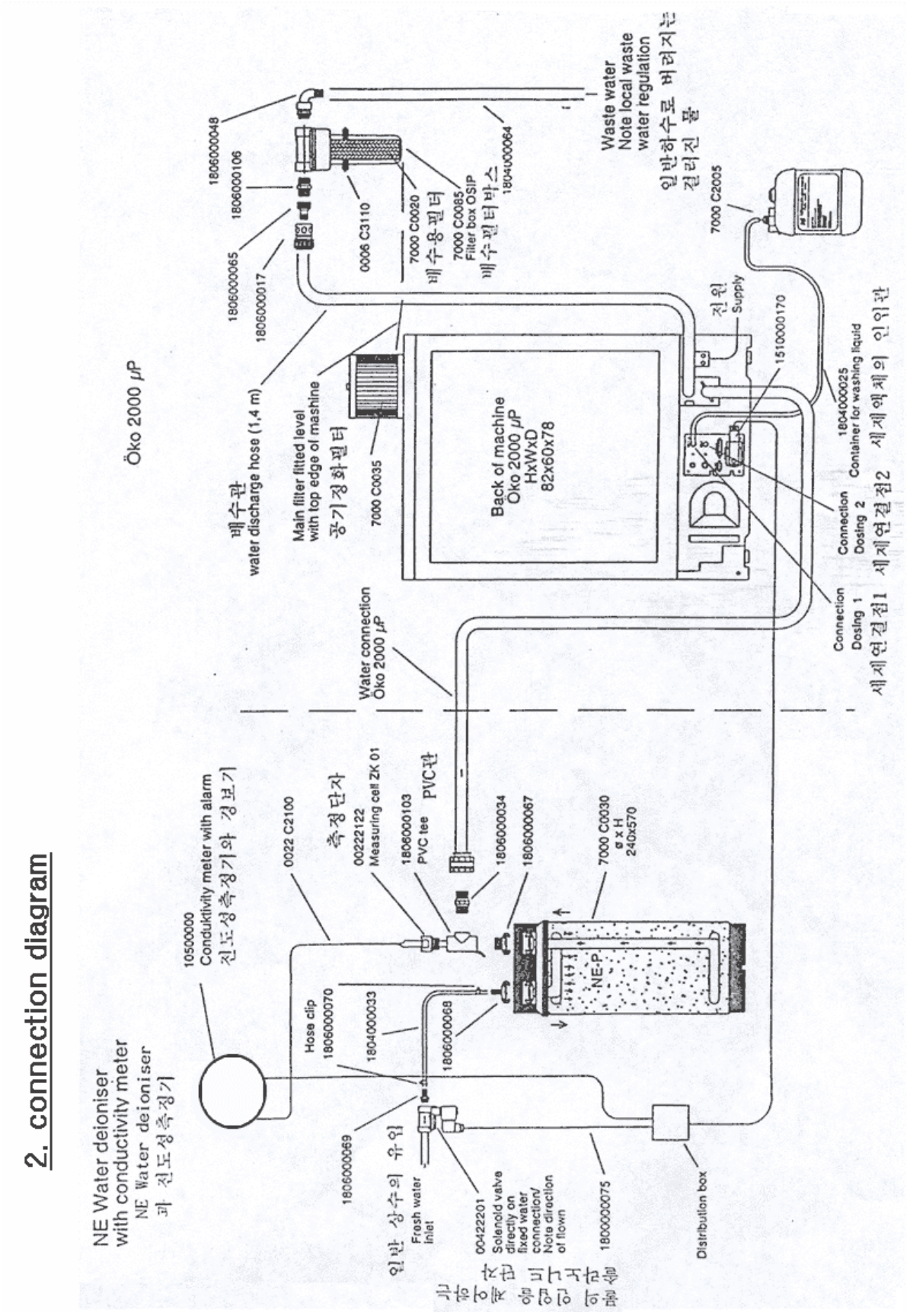
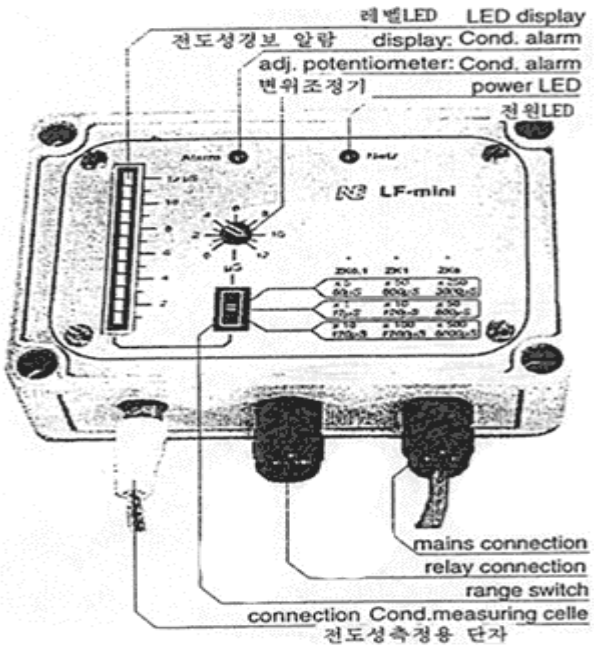
2. connection diagram



2.1 Information EC-mini [도성 측정기기 EC-mini]

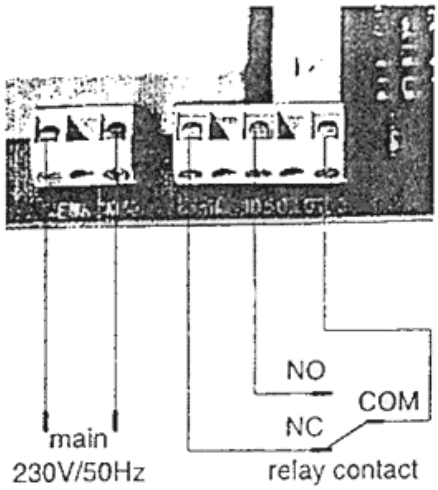
1. Control and Display elemens : [구성요소]

[Option] 기본장비 : 전도성 측정/경보기능



2. Connections PCB :

The PCB can be removed after umscrewing the 4 screws on the front panel



3. Technical Data : [기술적 Data]

Mains connection :	230V / 60Hz
Display :	LED Display, 12 Segments Back Light
Range or limit switch :	C= 0.01: 0 ~ 1.2µS / 0-6uS / 0 ~12 µS C=0.1: 0 ~ 12µS / 0.60uS / 0 ~120 µS
Alarm transmitter :	Visual + Acoustic + Relay Contact
Relay contact :	Floating potential max.250V / 8A / 2kw Relay switches at ACTUAL > SETPOINT
Connections :	Main relay internal terminals Conductivity celle : external cinch socket
Protection class :	II
Recommended conductivity for cartridge change : > 5 ~10 µS	

3. Starting up [주변 장치 조건]

3.1 Connecting up the circuit board washing machine:

The circuit board washing machine OKO2000µP must be set up in a firm horizontal position.
세척 PCB 는 세척기에 수직으로 올려놓아야 한다.

Water supply: 공급수
Connect up according to the connection diagram page 4. The water pressure should be at least 2 bar and not more that 8 bar. The machine must not be connected to a no-pressure water heater!
세척 공급수의 물의 압력은 2 Bar 이상 되어야 하며 8 Bar 를 넘어서는 않됩니다. 온수된 물을 공급하여서는 안되며 온수 인입 시 D.I water 의 기능저하 및 손상이 될 수 있습니다.
[Heating water 공급시 반드시 공급사 의 기술 협조를 바랍니다]

Drain: 배수
Connect up according to the connection diagram page 4 .참고바랍니다.
The local waste water regulations have to be observed!

Elect.connection: 전기공급
The washing machine must only be connected to a 220V~230V AC supply though a correctly installed mains socket. [누전 차단기 반드시 설치]

Air filter: 공기정화기
Screw the threaded rod supplied approx. 10mm into the top of the drier uint and lock it with the M5 nut.
Place the air filter on it (with the sealing tape at the bottom) and secure it with the knurled nut. 건조 시 공기정화 장치 Unit

3.2 Installation of the filter unit: 배수필터의 설치

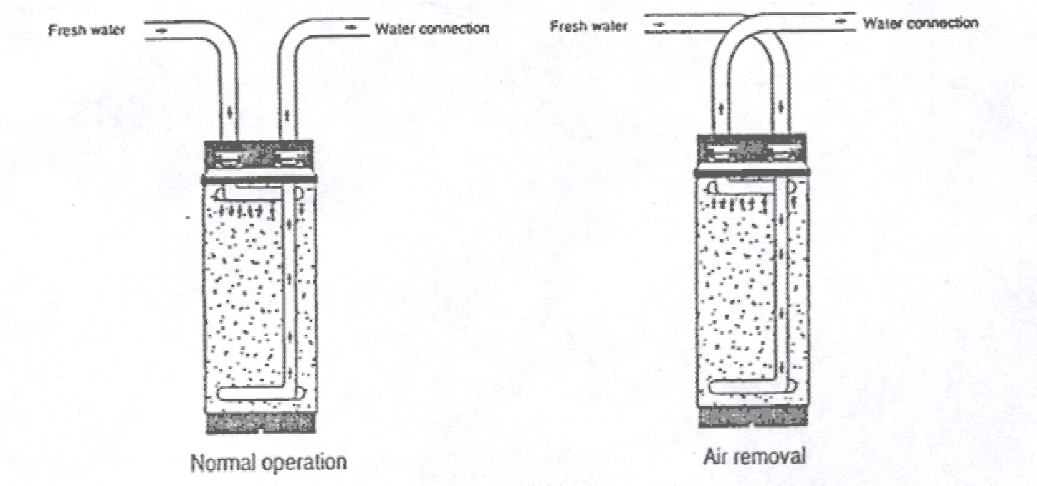
The filter unit supplied has to be mounted on the wall **at or above the top of the machine.** (see connection diagram). 배수필터는 세척기 상부보다 더 위쪽벽에 설치되어야 한다.

3.3 Removing the air from the deioniser cartridge

In order to obtain optimum effectiveness of the deioniser cartridge the air inside it should be removed before starting up for the first time.
For adequate air removal it is necessary to pass approx. 3×5 litre water (at intervals) though the deioniser cartridge in the reverse direction. This means that fresh water supply is connection to the “drain” of the cartrid, the water connection to the OKO 2000 µP is connected to the “supply” of the deioniser cartridge.

The remaining air can be removed at the vent value in the cover.

[세부 요약]
물의 압력은 최소한 2bar(2kg/cm^2)~8 bar 이하이어야 한다.
세척기의 공급-물 압력이 없어서는 안 된다.
전력은 정상적으로 설치된 main 소켓을 통해 공급되는 AC220V~230V
누전차단기/접지 반드시 시공하십시오[사용자 측].



3. 4. Wash Agent Dosage

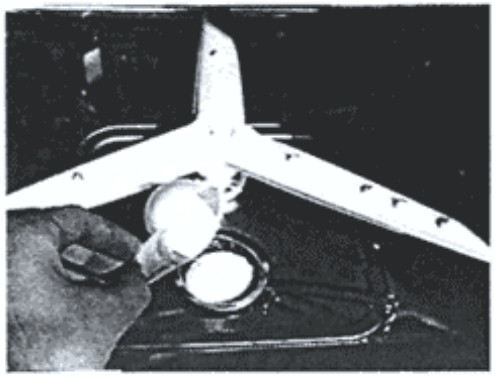
Aktivator AT. Liquid + Mix 2 초-강력세척 산화방지 코팅
Komponents A Liquid + Mix 3 강력세척 산화방지. 정전기 방지. 수막방지 코팅

Power:
Place the **power** at the position indicated before the start of the cleaning process.

Activator AT
Manual: 수동 공급 Powder
Place activator AT also into the washing chamber before the start of the cleaning process.

Automatic: 세척액 자동 공급
Program the required quantity at dosage 1.

Abb. 1



Komponents A + Mix3

Power:
Place the **powder** at this point before the start of the cleaning process!

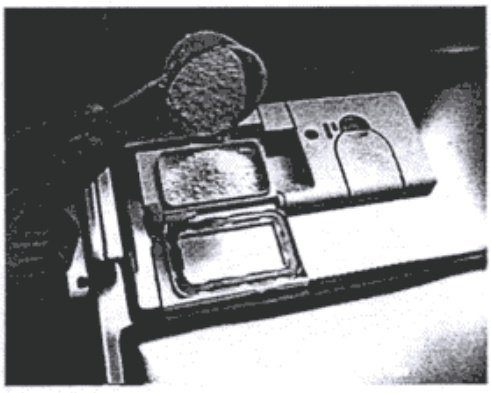
Mix 3
Place the **powder** at this point before the start of the cleaning process!

Powder는 전도성 측정 Cell 부분에 Manual로 PCB 량 과 세척물의 량에 따라 투입시키어 줍니다.

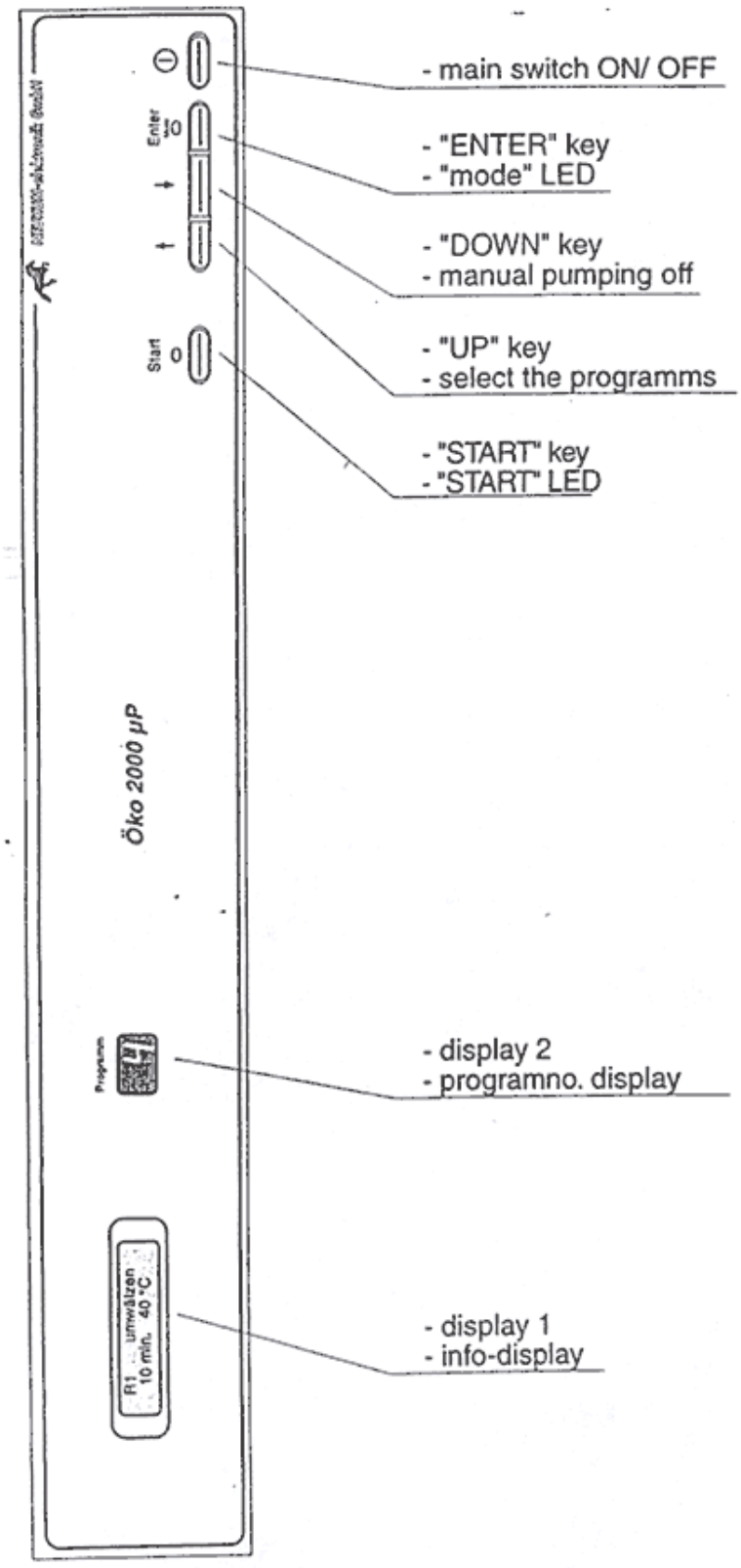
1회 세척량
A4 SMD Ass'y Size기준 70 ~100장 세척

부품의 높이에 따라 세척량의 변화가 있을 수 있습니다.

Abb. 2



3. 5 Operating controls front panel [전면부 조작 판]



전원 스위치 다른 Multi-Key로도 함계 사용

프로그램 선택 물-강제배수. 전원Key. 함계사용

프로그램. 기능 하/상 선택 Key
[전원Key와 사용하면 초기화 기능]

프로그램. 기능 상/하 선택 Key

세척시작 Key

프로그램번지 및 Function 번호

세척. 린스.건조. 추가건조
세척 청결도.전도성 표시 및 Error Message표시

3. 6 Cleaning [세척]

1. Preparation

- Open the front door
- Dosage of the cleaning agent (see item 3.4)
- Place the frames carrying the circuit boards into the wash chamber

1. 준 비
-Front door연다.
-세척제 투입 [겨울철에는 예열 후]
-세척할 PCB를 세척 조에 넣는다.

2. Cleaning

- Close the front door.
- Switch on the OKO2000 uP.
- Select the required program with the UP key.
- Enter the selected program with the ENTER key.
- Start the selected cleaning program with the START key.
- The machine begins to run; the program sections are indicated on display 1
- Finish message after the end of the cleaning program

2. 세 척
- Front door(앞문)을 닫는다.
- Oko 2000의 Main Switch를 "ON" 시킨다.
- up key를 사용해 program을 선택한다.
- 선택한 Program에 <Enter>를 입력한다.
- 선택한 Cleaning Program을 Start key로 진행시켜라.
- Cleaning Program이 끝난 후 마지막 메시지가 나온다.

2. Removing the washed load

- Switch off the machine
- Open the front door
- Remove the wash frames with circuit boards from the wash chamber. Warning: the washed load is hot!
- Close the front door

3. 세척 PCB 꺼내기
- Cleaning Machine의 Switch를 "off"시킨 후 front door(앞문)을 연다.
- 세척 공간內의 frame을 앞쪽으로 이동시킨다.

*주의: 세척이 끝난 직후는 內部의 Frame과 PCB모두가 뜨겁다.
-front door (앞문)을 닫아라.

Please note:

The machine works only when the front door is closed properly. Opening the front door immediately innterrupts the program equence. This is indicated by flashing on display 2.
During the heating-up phase the displays for cleaning and rinse times are flashing. After the temperature has been reached the programmed time starts. The time remaining is shown on the display(counting down)

Cleaning machine는 Front door 가 닫혀을 때만 작동이 된다. front door 를 열게 되면 열자마자 진행하던 program이 즉시 중단이 된다. (문을 닫으면 계속진행) Display에 Flashing으로 표시된다. (counting down) 방식으로 남은 시간이 표기된다.

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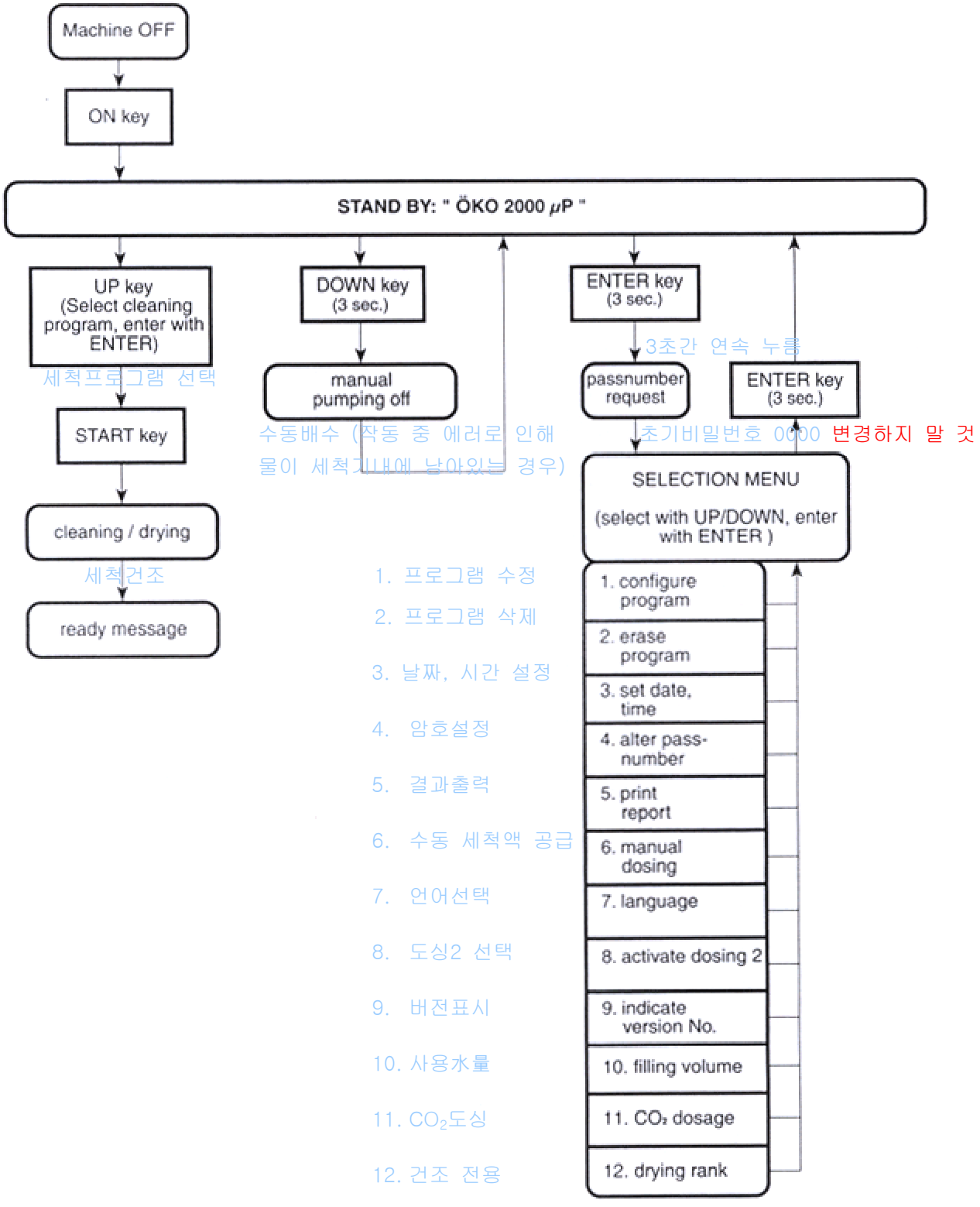
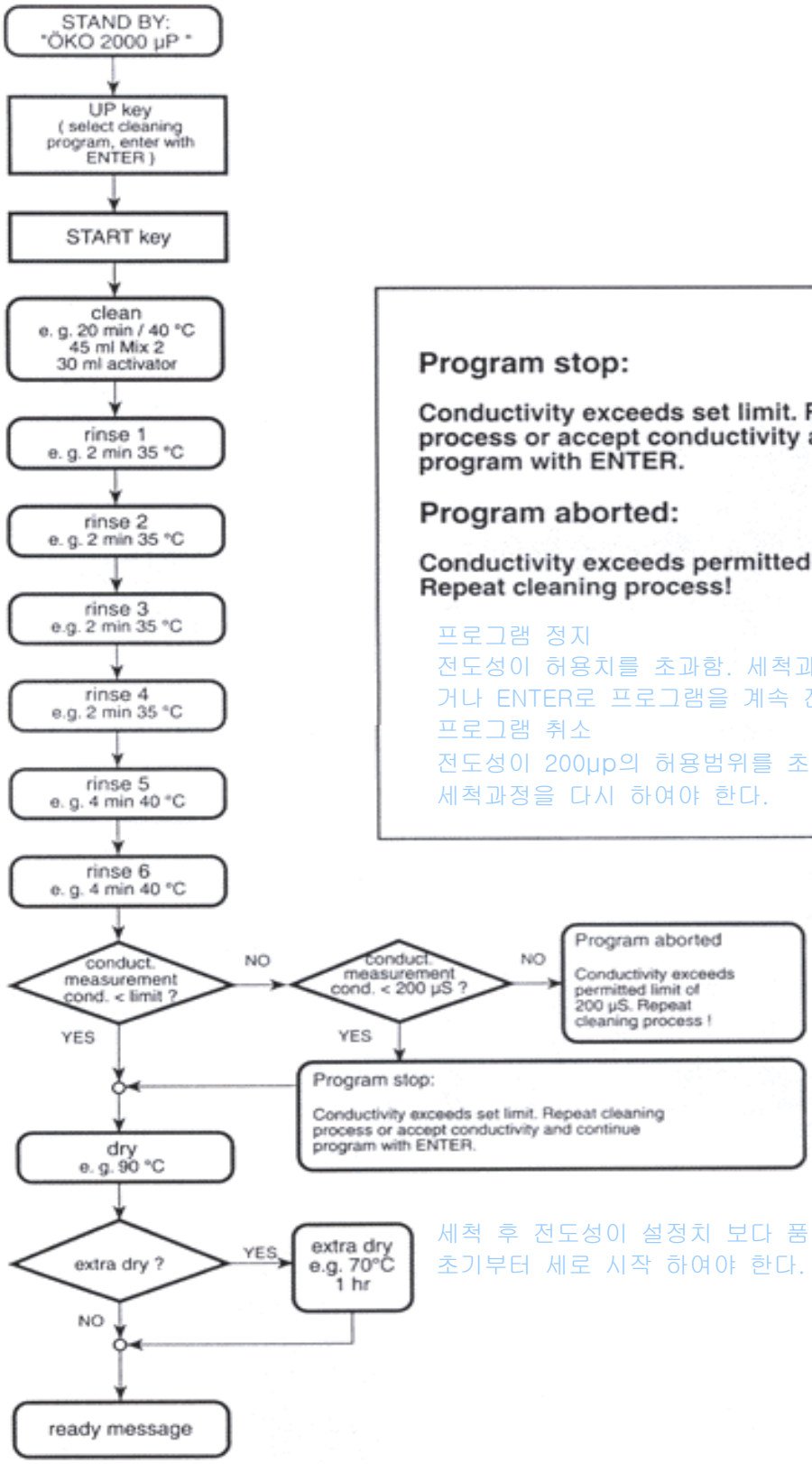
3. 7 Operating Summary 프로그램 및 운영 기능도



3. 8 Program example without automatic rinse(no ASP function) [자동세척도 없는 프로그램]



Program stop:

Conductivity exceeds set limit. Repeat cleaning process or accept conductivity and continue program with ENTER.

Program aborted:

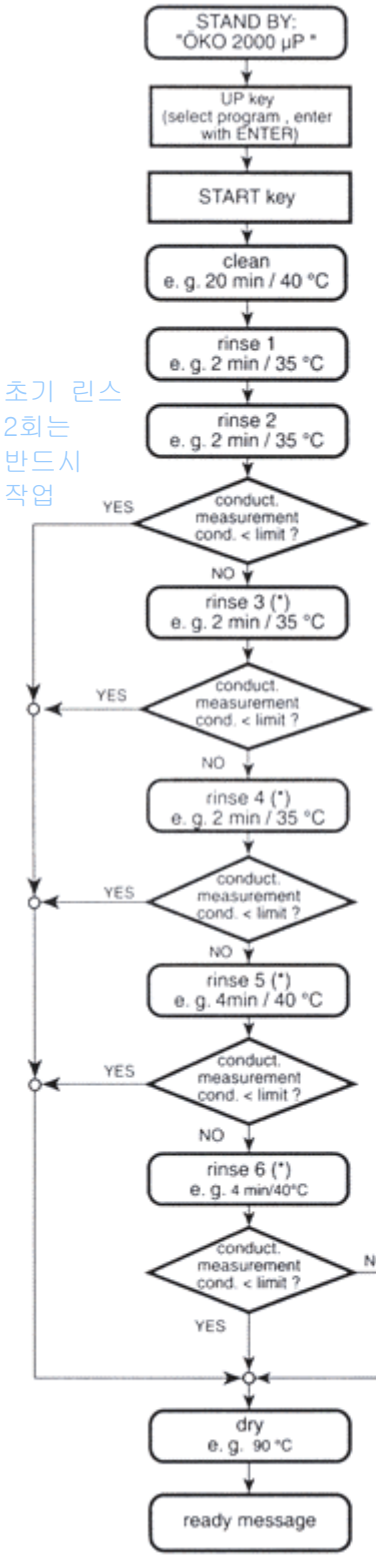
Conductivity exceeds permitted limit of 200 µS. Repeat cleaning process!

프로그램 정지
전도성이 허용치를 초과함. 세척과정을 다시 하거나 ENTER로 프로그램을 계속 진행한다.
프로그램 취소
전도성이 200µp의 허용범위를 초과함.
세척과정을 다시 하여야 한다.

세척 후 전도성이 설정치 보다 품질 이하일 때 초기부터 세로 시작 하여야 한다.

3. 9 Program example with automatic rinse(with ASP function)

자동세척도의 예제 프로그램 (자동 세척도 검사 후 다음공정 자동 진행)



초기 린스 2회는 반드시 작업

ASP function:

From rinse 2 onwards the rinse water conductivity is measured after each rinse. If the measured value is lower than a limit set by the user, the subsequent rinses are omitted. (*)

Program stop:

If after rinse 6 conductivity still exceeds the set limit, the program is stopped. If the measured conductivity is below 200µS the program can be continued by pressing ENTER.

Program aborted:

If after rinse 6 conduktivity is still above 200 µS the program is aborted. The cleaning process must be repeated since inadequate cleaning must be expected.

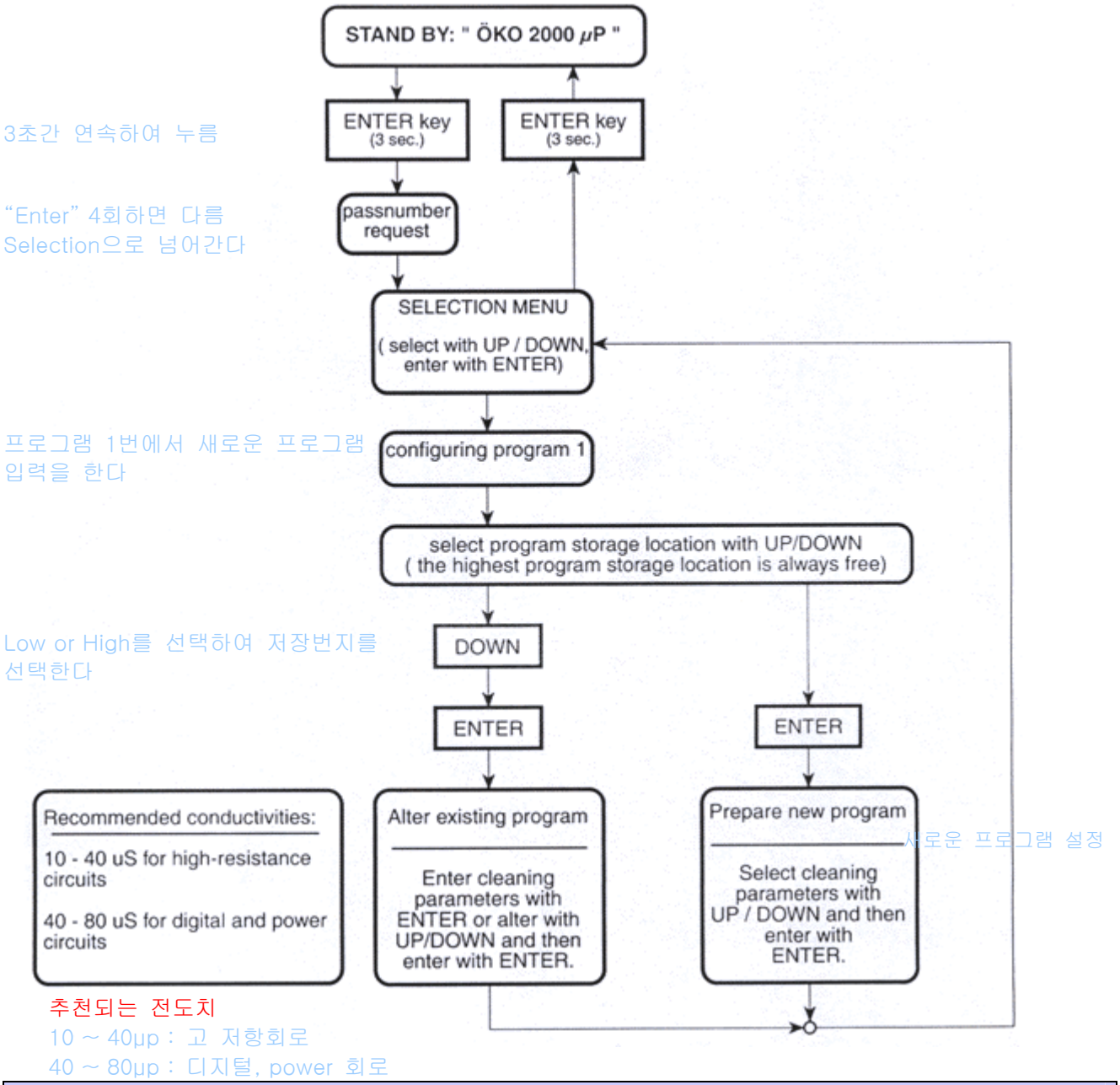
세척의 전도성은 각 세척 단계에서 측정된다.
만약 측정된 값이 사용자에 의한 설정 값 보다 낮다면 다음 단계로 진행한다.

프로그램 정지
세척6 회 과정 후에도 전도성이 한계 치를 초과한다면 프로그램은 정지된다.
만약 측정된 전도성이 200µp이하이라면 ENTER를 눌러 계속 진행할 수 있다.
프로그램 취소
세척6과정 후에도 전도성이 200µp보다 높다면 프로그램은 취소된다.
세척과정을 다시 시작해야 한다.

추가 건조 가능, Burning Test로 기능 사용

3. 10 Configuring the program [프로그램 입력 방법]

초기 장비 출고시 3 or 4개 프로그램 설정 Program 1 & 2 번 Mix 2 Program 3번 Mix 3 설정


STAND BY: " ÖKO 2000 µP "
ENTER key (3 sec.)
ENTER key (3 sec.)
passnumber request
SELECTION MENU
(select with UP / DOWN, enter with ENTER)
configuring program 1
select program storage location with UP/DOWN
(the highest program storage location is always free)
DOWN
ENTER
ENTER
Recommended conductivities:
10 - 40 uS for high-resistance circuits
40 - 80 uS for digital and power circuits
Alter existing program
Enter cleaning parameters with ENTER or alter with UP/DOWN and then enter with ENTER.
Prepare new program
Select cleaning parameters with UP / DOWN and then enter with ENTER.

3초간 연속하여 누름

"Enter" 4회하면 다름 Selection으로 넘어간다

프로그램 1번에서 새로운 프로그램 입력을 한다

Low or High를 선택하여 저장번지를 선택한다

새로운 프로그램 설정

추천되는 전도치
10 ~ 40µp : 고 저항회로
40 ~ 80µp : 디지털, power 회로

Please note:

Automatic rinse can only be selected if all 6 possible rinses have been programmed.

Abort " configure program" by pressing ENTER key (3sec.)

The selected or altered program is not stored!

자동세척은 모든 6개 세척 과정이 프로그램 되어 있다면 선택 할 수 있다.

ENTER를 3초간 누르면 "configure program"은 취소된다.

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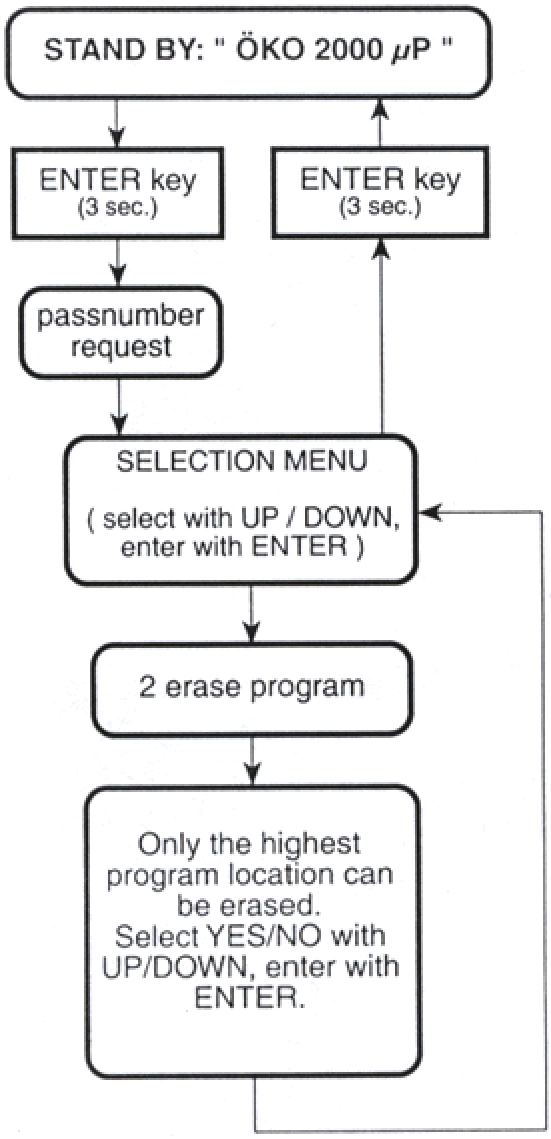
3. 11 Erasing a program [프로그램의 삭제]


STAND BY: " ÖKO 2000 µP "
ENTER key (3 sec.)
ENTER key (3 sec.)
passnumber request
SELECTION MENU
(select with UP / DOWN, enter with ENTER)
2 erase program
Only the highest program location can be erased. Select YES/NO with UP/DOWN, enter with ENTER.

프로그램 2번에서 사용

해당번지에서 삭제한다

Please Note :

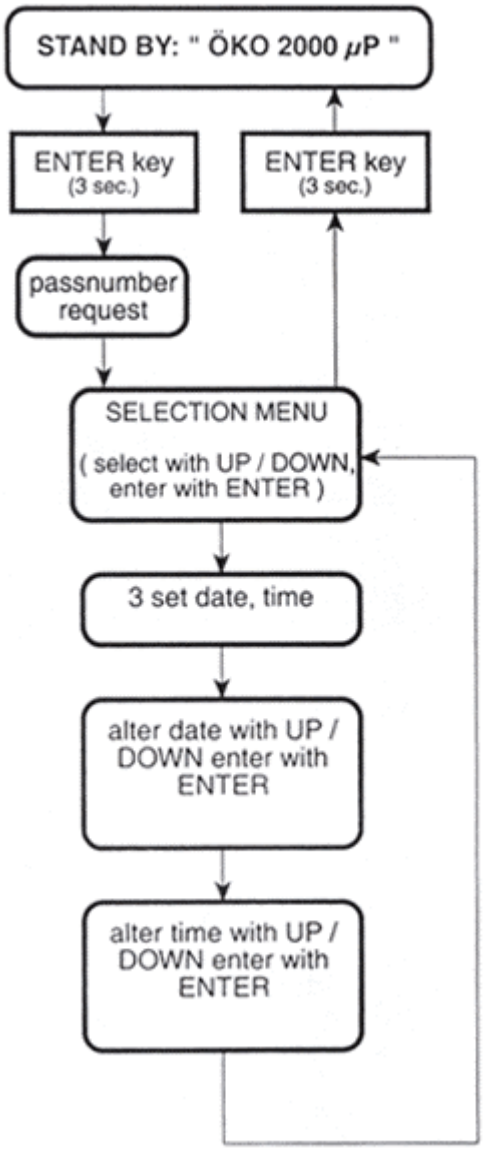
Only the cleaning program at the highest storage location can be erased.

Abort "erasing a probram" by pressing ENTER key (3sec.).

가장 높은 저장위치에 있는 세척프로그램이 지워진다.

ENTER를 3초간 누르면 "erasing a program"은 취소된다.

3. 12 Setting Date, Time [날짜, 시간 설정]

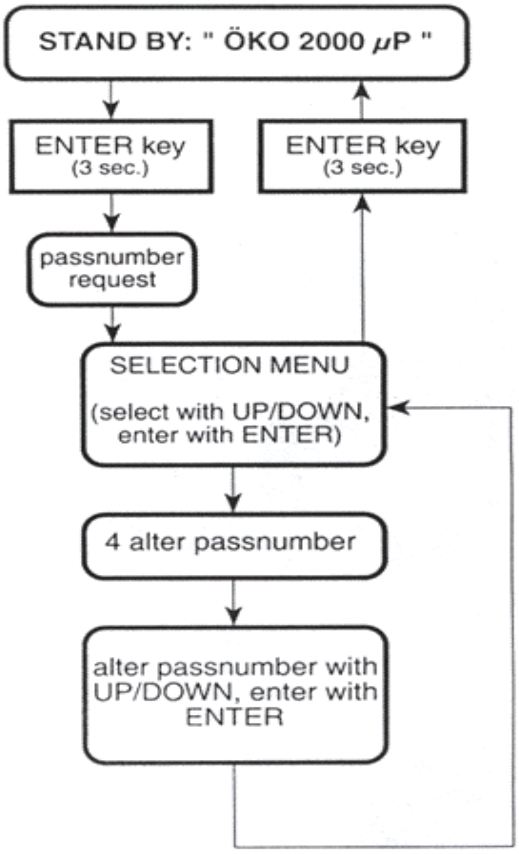

STAND BY: " ÖKO 2000 µP "
ENTER key (3 sec.)
ENTER key (3 sec.)
passnumber request
SELECTION MENU
(select with UP / DOWN, enter with ENTER)
3 set date, time
alter date with UP / DOWN enter with ENTER
alter time with UP / DOWN enter with ENTER

Please Note :

Date is stored as follows: day / month / Year. Abort "set date, time" by pressing ENTER key (3 sec) The programmed data are not stored!

날짜는 day / month / year 와 같이 저장된다. ENTER를 3초간 누르면 "set date, time"은 취소된다. 프로그램된 데이터는 저장되지 않는다.

3. 13 Altering the Pass number [비밀번호 등록 방법] 초기번호 0000 변경하지 않는 것이 좋다


STAND BY: " ÖKO 2000 µP "
ENTER key (3 sec.)
ENTER key (3 sec.)
passnumber request
SELECTION MENU (select with UP/DOWN, enter with ENTER)
4 alter passnumber
alter passnumber with UP/DOWN, enter with ENTER

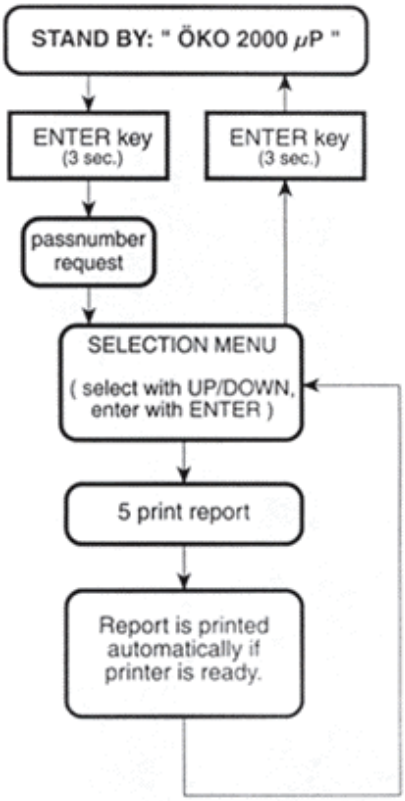
Current Pass Number					
0	0	0	0	Date, signature	초기설정 값
				Date, signature	
				Date, signature	
				Date, signature	
				Date, signature	
				Date, signature	

Please Note :

It is essential to note any alterations in the records (see above); without knowledge of the Passnumber there is no Further access to Programming.
Abort "alter Pass number" by pressing ENTER key (3 Sec).
The altered Pass number is not Stored !

3초간 Enter Key를 누르면 다음 프로그램 공정으로 들어갈 수 있다

3. 14 Printing the Cleaning Report


STAND BY: " ÖKO 2000 µP "
ENTER key (3 sec.)
ENTER key (3 sec.)
passnumber request
SELECTION MENU
(select with UP/DOWN, enter with ENTER)
5 print report
Report is printed automatically if printer is ready.

Printer Connection :

The connector (9-pin sub-D) is located at the bank of the machine.
Items required :

1) serial printer (e.g. EPSOM LQ570+)
2) null modem cable

Pin connections of the sub-D

Connector : 1 = NC
2 = RxD
3 = TxD
4 = DTR
5 = GND
6 = NC
7 = NC
8 = CTS
9 = NC

Please note:

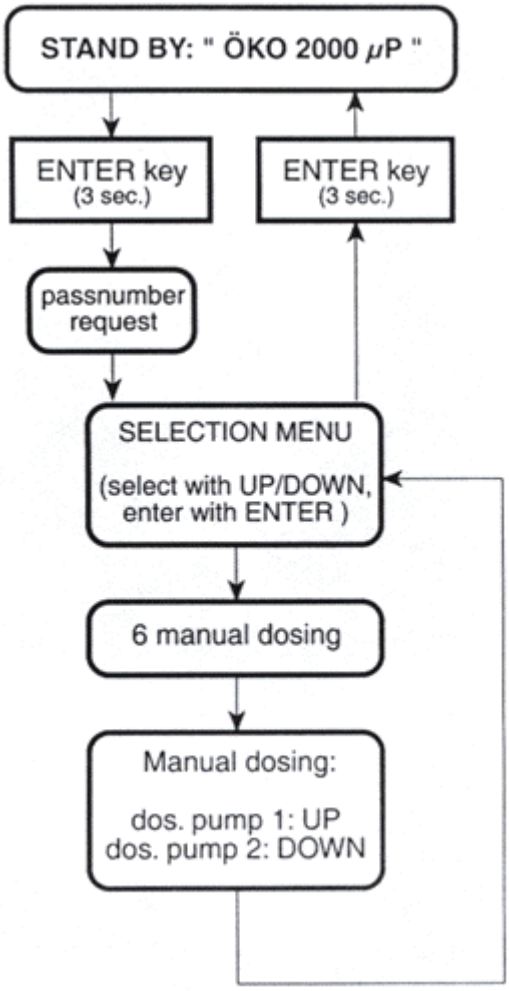
The cleaning program used most recently can be printed at any time.

If no printer is connected, the selection menu is called up again automatically after 3 sec.

After the end of a cleaning process the report is printed automatically if a printer is connected.

For connection of the RS232 interface see above.

3. 15 Manual Dosing [수동 세척-액 공급 / Key Function으로] Liquid A or AT

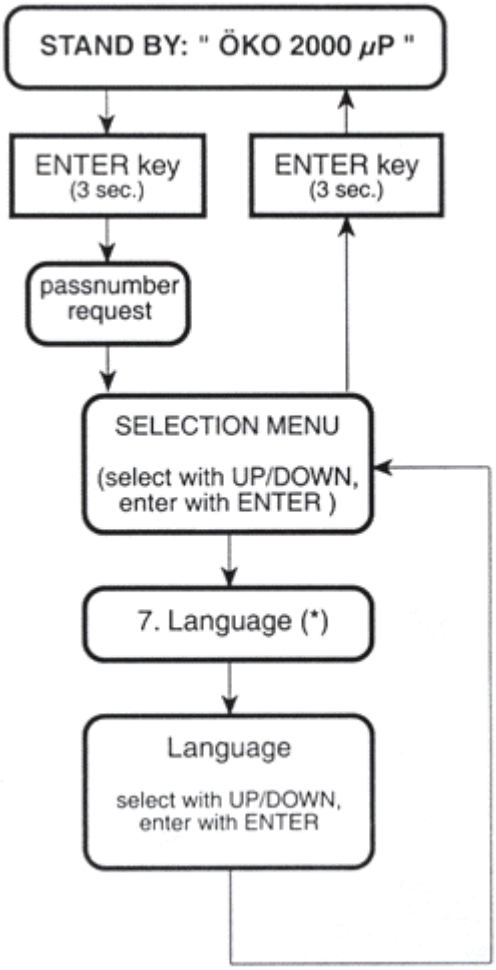


Please Note :

Following a change in the liquid component, dosing should be manual until the suction hose is free from air bubbles. The front door can be opened during this time to check that the cleaner passes into the wash chamber. Closing the front door does not automatically return to STAND-BY! Terminate manual dosing by pressing the ENTER key.

사용 예) 프로그램 상태에서 세척 액 자동 공급이 부족하거나 다른 이유로 적게 들어 같을 경우 사용하는 기능이다

3. 16 Language [언어 선택] 영어/독일어/프랑스어 등을 선택 할 수 있다.

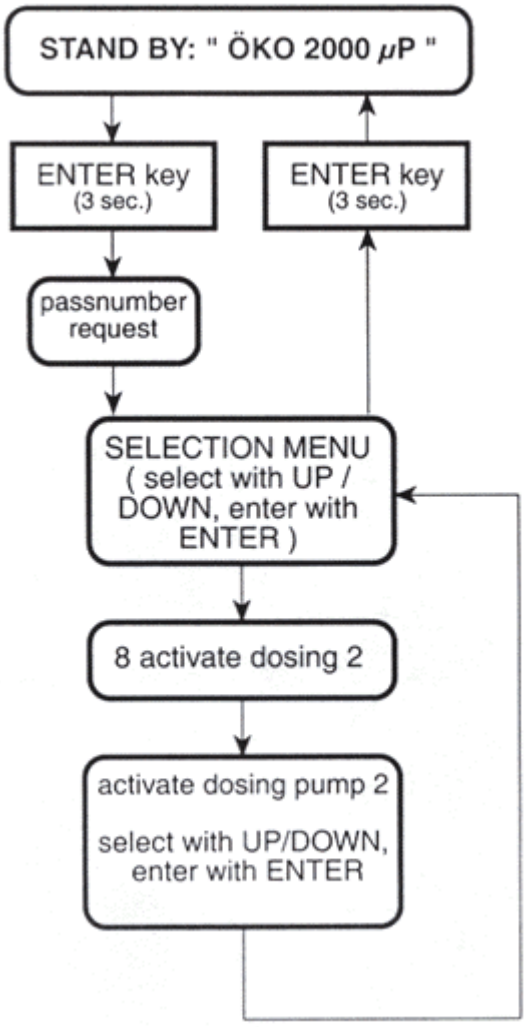


Please Note :

Abort "Language "by pressing the ENTER key (3 sec) Alterations are not stored.

4.17 Activating Dosing pump 2 [세척액 자동 선택 기능]

세척액은 A or AT 2종류가 있으며 PCB세척용도에 따라 자동 공급을 Dos 1 or Dos 2 선택


STAND BY: " ÖKO 2000 µP "
ENTER key (3 sec.)
ENTER key (3 sec.)
passnumber request
SELECTION MENU (select with UP / DOWN, enter with ENTER)
8 activate dosing 2
activate dosing pump 2
select with UP/DOWN, enter with ENTER

Please Note :

This program step can be carried out even if there is no second dosing pump.
This has no negative effects on the cleaning process.
Abort "activate dosing 2" by pressing the ENTER key (3 sec.)
Activating or de-activating is not stored

세척액 자동 선택기능 Dosing = Dispenser의 줄인 글자

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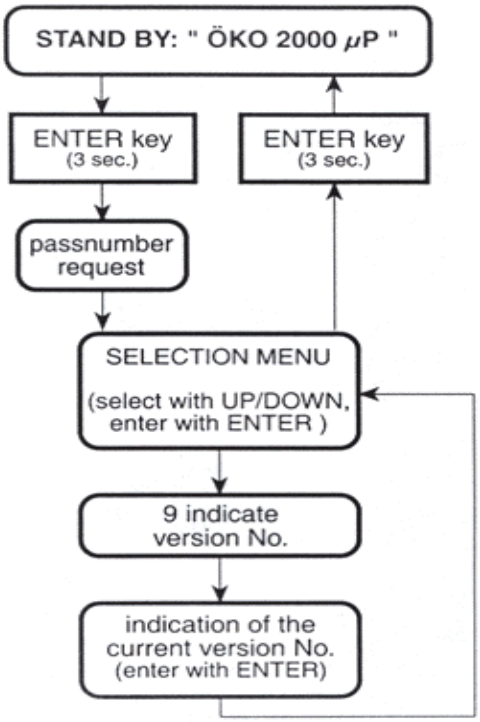
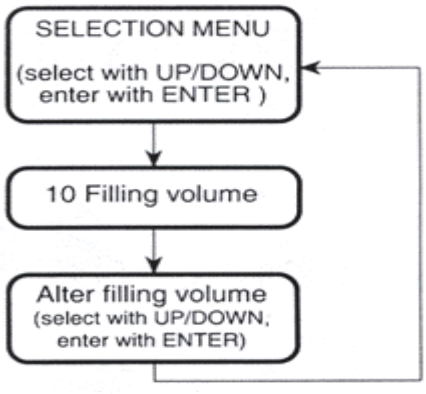
3. 18 Indicating the Version No. [프로그램 버전] 단순 프로그램 버전 확인 기능이다



3. 19 Altering the Filling Volume [세척시 물-공급량을 설정하는 기능]



Please Note:

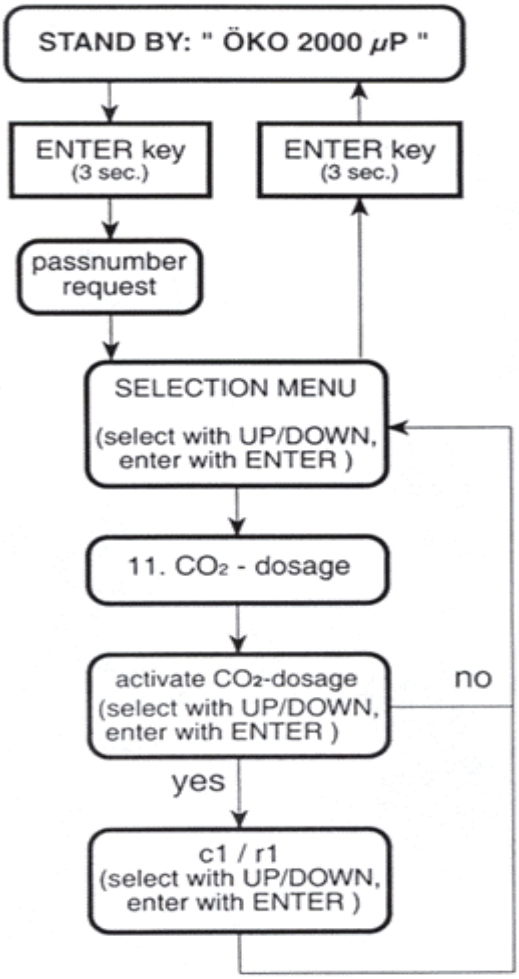
A filing volume of 5.0 Litter is optimum volume with average machine loading.

The filing volume should only be altered if the load is extremely small or extremely large.

The volume setting applies to all programs.

사용 예) PCB 세척량에 따라 물 을 5.0 / 5.5 / 6.0 리터 등으로 설정 할 수 있다

3. 20 CO_2-Dosing [이산화 탄소 경고]



Please Note :

This program step can operate even if there is no CO_2 dosing facility (accessory).
This has no negative effects on the cleaning process. CO_2 dosing, if activated, is carried out during the last. 3 minutes of the selected wash cycle (c1/r1)

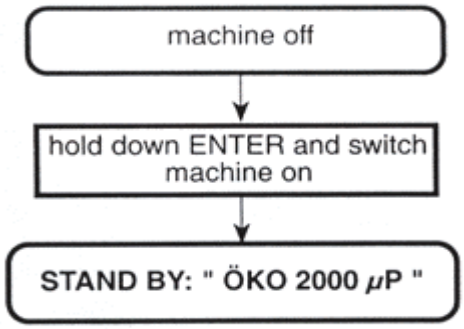
In the case of CO_2 dosing in wash cycle r1 it is important that this lasts at least 4 minutes.
Activated or de-activated CO_2 dosing is effective in all programs.

세척. 리스 작업시 이산화탄소 발생시 사용되는 기능으로 세척장소에 환기가 되도록 환경이 되어야 한다. 밀폐된 공간 시 별도의 환기 시설 필요합니다

3. 21 RESET : Manual Pumping off [모든 프로 그램 초기화 시킬 때]

Reset방법 : 프로그램 에러 시 프로그램 변경이 불가능하므로 Reset 후 진행
Oko 2000μp 이 나타날 때 까지 Hold Down Key 와 ENTER를 동시에 누른다.

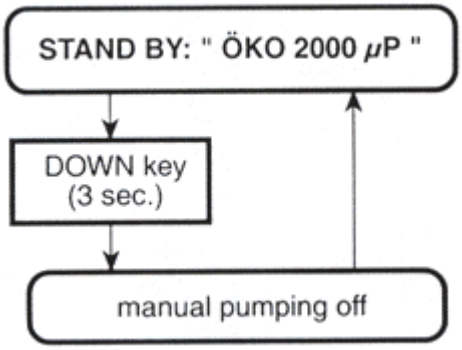
RESET:



Please note:

Hold down ENTER until the display shows " OKO 2000 μP"

Manual Pumping off : [세척 물 강제 배수 Pump작동] 세척 중 문제시 물 배수



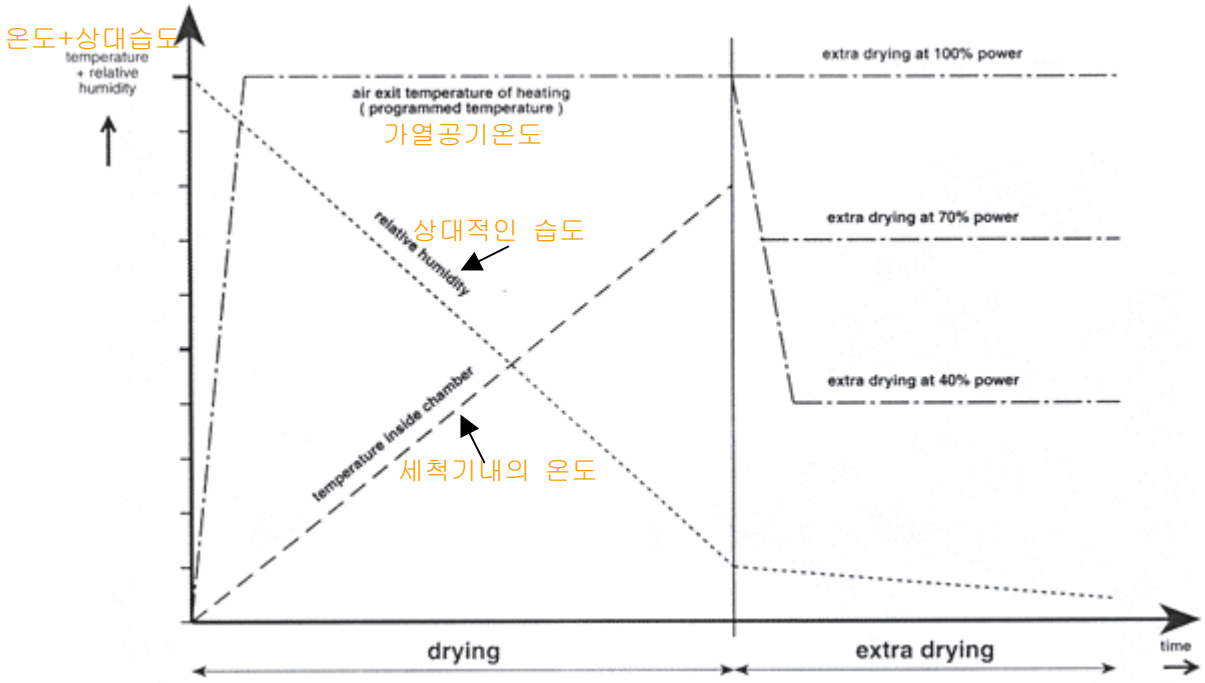
배수는 평균 2분이 진행되고 자동적으로 STAND-BY로 돌아온다.

프로그램이 아닌 세척과정 에러시 수동배수방법

Please Note : Down Key 3초 이상 누르면 배수가 시작 된다

Pumping off approx.2 min, followed by automatic return to STAND-BY

3. 22 Drying 건조 [추가건조에 따른 습도 설정 도표]



Drying :

The rise of air temperature inside the chamber depends on the moisture content of the load.
If the air temperature reaches 80% of the set value it can be assumed that moisture content of the load is already at its minimum.

세척기내의 공기의 온도는 적재물의 습도에 의존하여 증가한다.
만약 공기의 온도가 설정 값의 80% 이르면 적재물의 습도는 최소치에 이른다고 할 수 있다.

Extra drying : 추가건조 100% 70% 40% 의 추가건조를 할 수 있다.

In addition to the drying phase it is possible to add an extra drying phase which may be necessary depending on the application. The power of air heating can them be selected between 100%, 70% and 40% of the value programmed for drying. (Duration can be programmed from 0.1 to 10 hrs.)

Please Note :

The load may be very hot immediately after drying; care is required during unloading!
A steady discharge of small amounts of moist air from the back of the machine is quite normal (Please do not obstruct it!)
적재물은 건조직후 매우 뜨겁기 때문에 조심스럽게 꺼내야 한다. 필터매트는 한달에 한번 세척을 해준다.

4. Notes and maintenance [기타 운영 시 정검 및 응급조치]

4.1 Foaming:

NOTE: strong foaming leads to inadequate cleaning action!

If large amounts of foam are produced during washing, the cause is generally that too little activator has been added.

Strong foaming can be recognized as follows:

- visually, if a foam layer is visible when opening the door, or when foam is discharged from the machine.
- audibly, by irregular running of the circulating pump(repeatedly running empty).

배수부분을 1개월 1회 이상 청소를 하여 주어야 한다 이-물질 제거 및 규션 필터 청소

4.2 Replacing the filter cartridge:

The wash liquid and the rinse water are passed through the filter cartridge to remove any solid particles. [원통-형 필터 "카드리지"을 회전 반대 방향으로 분해하여 내부 청소를 하여 준다]

The filter cartridge has to be replaced when the wash liquid has not been completed pumped off during the time provided (3min), as seen through the filter cartridge housing.

4.3 Replacing the air filter:

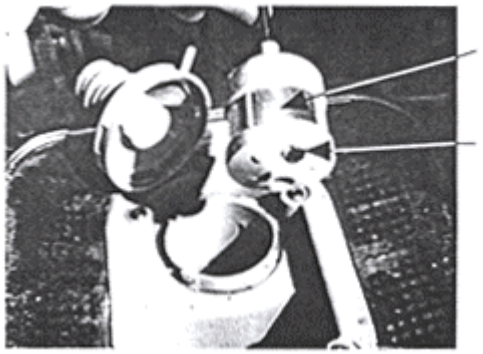
The air required for drying is drawn in via a particulate filter. After 50 drying processes the display shows "check air filter". Replace filter if required. Unscrew the knurled nut and remove the filter.

4.4 Cleaning the dirt trap:

At regular intervals(about six times a year)

the solenold at the trap has to be cleaned.

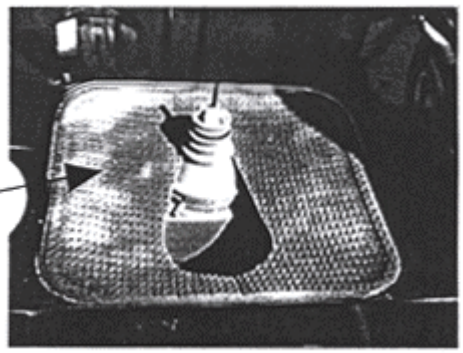
노줄이 막히면 자동으로 막힌 것을 솔라노이드 연속 작동으로 뚫어준다 3개월 1회 청소



4.5 Cleaning the sieve insert:

At regular intervals(about four times a year) the sieve in the wash chamber has to be removed and the space below it has to be cleaned out with an industrial cleaning machine to remove any residual solider.

내부청소 1개월 1회 이상



The filter mat has to be cleaned with fresh water every month.

6. Washing program [제품 출고시 프로그램 설정]

6.1 Standard wash programs 장비 우형에 따라 변경되어 입력 되어 있을 수 있음

	program 1	program 2	program 3	program 4
clean	20 min. / 40 °C	20 min. / 40 °C	20 min. / 70 °C	10 min. / 70 °C
rinse 1	2 min. / 30 °C	2 min. / 30 °C	2 min. / 30 °C	10 min. / 30 °C
rinse 2	2 min. / 30 °C	2 min. / 30 °C	2 min. / 30 °C	2 min. / 30 °C
rinse 3	2 min. / 30 °C	2 min. / 30 °C	2 min. / 30 °C	2 min. / 30 °C
rinse 4	2 min. / 30 °C	2 min. / 30 °C	2 min. / 30 °C	2 min. / 30 °C
rinse 5	6 min. / 30 °C	6 min. / 30 °C	6 min. / 30 °C	6 min. / 30 °C
rinse 6	6 min. / 40 °C	6 min. / 40 °C	6 min. / 40 °C	6 min. / 40 °C
dosage 1	40 ml	40 ml	60 ml	60 ml
dosage 2	no	no	no	no
ASP function	YES☒ NO☐	YES☒ NO☐	YES☒ NO☐	YES☒ NO☐
conduct. limit	50 µS	50 µS	50 µS	50 µS
dry	100 °C	100 °C	100 °C	100 °C
extra dry	YES☐ NO☒	YES☐ NO☒	YES☐ NO☒	YES☐ NO☒
	40% ☐	40% ☐	40% ☐	40% ☐
	70% ☐	70% ☐	70% ☐	70% ☐
	100 % ☐	100 % ☐	100 % ☐	100 % ☐

Please Note :

Program 1 cannot be configure or erased.

6.2 User programs [사용자 프로그램 Sheet]

Function	Program	Program	Program	Program	Program
Clean					
Rinse 1					
Rinse 2					
Rinse 3					
Rinse 4					
Rinse 5					
Rinse 6					
Dosage 1					
Dosage 2					
ASP function	YES☐NO☐	YES☐NO☐	YES☐NO☐	YES☐NO☐	YES☐NO☐
Conduct.limit					
Dry					
Extra dry	YES☐NO☐	YES☐NO☐	YES☐NO☐	YES☐NO☐	YES☐NO☐
	40% ☐	40% ☐	40% ☐	40% ☐	40% ☐
	70% ☐	70% ☐	70% ☐	70% ☐	70% ☐
	100% ☐	100% ☐	100% ☐	100% ☐	100% ☐

Please Note : 고객이 필요에 따라 프로그램작성 Sheet

ASP function can only be selected if all 6 rinses are programmed.

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7. Technical information [장비의 제원]

The water is heated in a through-flow heater; as a result there are no inconvenient heater bars inside the chamber. The water protection system and the bottom-pan ensure that leakage of water is virtually impossible. This gives a high degree of protection agains wate damage. Very quiet operations is achieved through comprehensive 6-sided sound insulation.

Wash temperature	20℃- 70℃
Wash time	5 - 40 min
Rinse time / after rinse	20℃- 70℃
Rinse time / after rinse	2 - 10 min
Number of after-rinses	0 - 6
Temperature /warm air drying (due to heat losses through radiation and conduction the chamber temperature is approx. 80% of the selected drying temperature.)	40℃- 100℃
Duration/ extra drying (wash-only and dry-only programs can be operated)	0.1 - 10 hour
Power supply	220 V AC / 60Hz
Power consumption	3.0 kW
Running noise level	Approx. 55 dB(A)
Water consumption / fill	Approx. 5 L Deionised water
Max. circuit board size, top	450mmx260mm
Max. circuit board size, bottom	450mmx280mm
Max. circuit board size (without top basket)	450mmx450mm
Overall dimensions (H x W x D)	820 x 600 x780 mm
Weight	Approx. 55kg

We reserve the right to introduce modifications in line with technical progress.

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8. Cleaning notes Oko 2000μP

[Mix2 사용시 설정 예]

Progr.-No.2	Cleaner	Dosing quantity	Time(min)	Temp.(℃)
Cleaning	Mix 2 Aktivator	60/40-80 40/20-60	20/10-30	40/30-50
1. Rinse			2	30
2. Rinse			2	30
3. Rinse			2	30
4. Rinse			4	30
5. Rinse			6	30
6. Dry				100 / 80-100

universal programm 2 : do not use by "Fluxer FSW-34".

[Mix3 사용시 설정 예]

Progr.-No.2	Cleaner	Dosing quantity	Time(min.)	Temp.(℃)
Cleaning	Komponente A	80 / 60-100	10 / 10-20	70 / 60-70
1. Rinse	Mix 3	40 / 30-50	10	60 / 50-70
2. Rinse			2	30
3. Rinse			2	30
4. Rinse			4	30
5. Rinse			6	30
6. Dry				100 / 80-100

Programm 3 : do use by "Fluxe FSW-34 or other's.

좀더 세부적 내용에 대하여 하기 연락처 및 Email로 연락 주시기 바랍니다. 감사 합니다

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